WE CLAIM:

1. A method for detecting delays and gains of different propagation paths of a received signal, comprising:

correlating data corresponding to a first one of the propagation paths of the received signal with a conjugate of a pilot channel sequence;

repeating the correlation for other propagation paths of the received signal, wherein the other propagation paths correspond to a first set of propagation paths that also includes the first one of the propagation paths;

coherently accumulating results corresponding to the correlation for the first set of propagation paths;

calculating the square-magnitudes of the results corresponding to the first set of propagation paths; and

comparing the square-magnitudes of the results corresponding to first set of propagation paths to a threshold, wherein the square-magnitudes of the first set of propagation paths that surpass the threshold correspond to the delays and gains of the first set of propagation paths.

2. The method of claim 1, further comprising:

repeating the correlation for a second set of propagation paths;

coherently accumulating results corresponding to the correlation for the second set of propagation paths;

calculating the square-magnitudes of the results corresponding to second set of propagation paths;

non-coherently accumulating the square-magnitudes of the results corresponding to the first set of propagation paths with the square-magnitudes of the results corresponding to the second set of propagation paths; and

comparing the square-magnitudes of the results corresponding to the second set of propagation paths to the threshold, wherein the square-magnitudes of the results corresponding to the second set of propagation paths that surpass the threshold correspond to the delays and gains of the second set of propagation paths.

3. The method of claim 2, wherein the square magnitudes of the results corresponding to the first set of propagation paths and square magnitudes of the results corresponding to the second set of propagation paths are compared to the threshold substantially at the same time interval.

4. The method of claim 2, further comprising stalling the pilot channel sequence for a selected interval of time prior to repeating the correlation for a second set of propagation paths.

5. The method of claim 1, wherein the pilot channel sequence corresponds to a pseudo-random sequence that corresponds to the downlink scrambling code related to a code division multiple access system.

6. The method of claim 1, wherein data corresponding to the propagation paths of the first set of propagation paths is de-multiplexed into odd index data and even index data prior to correlating data corresponding to the first one the propagation paths of the received signal with a conjugate of the pilot channel sequence.

7. The method of claim 1, wherein correlating data further comprises loading tap coefficients of a matched filter with a conjugate of the pilot channel sequence, wherein the matched filter operates for a selected interval to produce the results of the correlation.

8. The method of claim 1, wherein the square-magnitudes of the results corresponding to the first set of propagation paths is appended to a vector that is then processed for comparison to the threshold.

9. A method for detecting delays and gains of different propagation paths of a received signal, comprising:

generating a pilot channel chip sequence starting from a pilot symbol boundary;

loading tap coefficients of a matched filter with a conjugate of the pilot channel sequence;

operating the matched filter to correlate a first set of data corresponding to the propagation paths with the conjugate of the pilot channel sequence, wherein operating the matched filter produces a first set of results corresponding to the a first set of data;

operating the matched filter to correlate a second set of data corresponding to the propagation paths with the conjugate of the pilot channel sequence, wherein operating the matched filter produces a second set of results corresponding to the second set of data;

coherently adding the first set of results with the second set of results;

calculating the square-magnitudes of the first set of results and the second set of results; and

comparing the square-magnitudes of the first and the second sets of results to a threshold, wherein the locations of the square-magnitudes that surpass the threshold correspond to the locations of the delays and gains of the first and second sets of data corresponding to the propagation paths.

10. The method of claim 9, further comprising:

stalling the pilot channel sequence for a selected interval of time;

generating another pilot channel chip sequence starting from another pilot symbol boundary;

loading tap coefficients of the matched filter with a conjugate of the other pilot channel sequence;

operating the matched filter to correlate a third set of data corresponding to the propagation paths with the conjugate of the other pilot channel sequence, wherein operating the matched filter produces a third set of results corresponding to the third set of data;

operating the matched filter to correlate a fourth set of data corresponding to the propagation paths with the conjugate of the other pilot channel

sequence, wherein operating the matched filter produces a fourth set of results corresponding to the fourth set of data;

coherently adding the third set of results with the fourth set of results;

calculating the square-magnitudes of the third set of results and the fourth set of results;

non-coherently adding the square-magnitudes of the first set of results and the second set of results with the square-magnitudes of the third set of results and the fourth set of results; and

comparing the square-magnitudes of the third and the fourth sets of results to the threshold along with the first and second sets of results, wherein the locations of the square-magnitudes that surpass the threshold correspond to the locations of the delays and gains of the first, second, third, and fourth sets of data corresponding to the propagation paths.

11. The method of claim 9, wherein the pilot channel sequence corresponds to a pseudo-random sequence that corresponds to the downlink scrambling code related to a code division multiple access system.

12. The method of claim 9, wherein the first set of data corresponding to the propagation paths is de-multiplexed into odd index data and even index data prior to operating the matched filter.

13. The method of claim 9, wherein the square-magnitudes of the first set of results and the square-magnitudes of the second set of results is appended to a vector that is then processed for comparison to the threshold.

14. An apparatus for detecting delays and gains of different propagation paths of a received signal, comprising:

means for correlating data corresponding to a first one of the propagation paths of the received signal with a conjugate of a pilot channel sequence;

means for repeating the correlation for other propagation paths of the received signal, wherein the other propagation paths correspond to a first set of propagation paths that also includes the first one of the propagation paths;

means for coherently accumulating results corresponding to the correlation for the first set of propagation paths;

means for calculating the square-magnitudes of the results corresponding to the first set of propagation paths; and

means for comparing the square-magnitudes of the results corresponding to first set of propagation paths to a threshold, wherein the square-magnitudes of the first set of propagation paths that surpass the threshold correspond to the delays and gains of the first set of propagation paths.

15. The apparatus of claim 14, further comprising:

means for repeating the correlation for a second set of propagation paths;

means for coherently accumulating results corresponding to the correlation for the second set of propagation paths;

means for calculating the square-magnitudes of the results corresponding to second set of propagation paths;

means for non-coherently accumulating the square-magnitudes of the results corresponding to the first set of propagation paths with the square-magnitudes of the results corresponding to the second set of propagation paths; and

means for comparing the square-magnitudes of the results corresponding to the second set of propagation paths to the threshold, wherein the square-magnitudes of the results corresponding to the second set of propagation paths that surpass the threshold correspond to the delays and gains of the second set of propagation paths.

16. The apparatus of claim 14, wherein the square magnitudes of the results corresponding to the first set of propagation paths and square magnitudes of the results corresponding to the second set of propagation paths are compared to the threshold substantially at the same time interval.

17. The apparatus of claim 14, further comprising means for stalling the pilot channel sequence for a selected interval of time prior to repeating the correlation for a second set of propagation paths.

18. The apparatus of claim 14, further comprising means for de-multiplexing the data corresponding to the first one the propagation paths into odd index data and even index data prior to correlating data corresponding to the first one the propagation paths of the received signal with a conjugate of the pilot channel sequence.

19. The apparatus of claim 14, wherein the means for correlating data further comprises means for loading tap coefficients of a matched filter with a conjugate of the pilot channel sequence, wherein the matched filter operates for a selected interval to produce the results of the correlation.

20. The apparatus of claim 14, wherein the square-magnitudes of the results corresponding to the first set of propagation paths is appended to a vector that is then processed for comparison to the threshold.